

## CLAIMS

- 1 1. A method comprising:
  - 2 in a database, maintaining a collection of documents containing content, each of the
  - 3 documents including a hyperlink to another document and represented by a unique logical
  - 4 information object (LOIO), each unique LOIO pointing to one or more physical information
  - 5 objects (PHIOs), each of the PHIOs containing a variant of the content of a document, the
  - 6 variant being one of more attributes; and
  - 7 determining a suitable PHIO when a LOIO is response to a request.
- 1 2. The method of claim 1 wherein the request is through a hyperlink.
- 1 3. The method of claim 1 wherein the attributes include a name of a component, a version of
  - 2 the component, a language of the document and/or a country version of the document.
- 1 4. The method of claim 1 wherein determining comprises:
  - 2 receiving an entry context representing a desired set of values for one or more
  - 3 attributes;
  - 4 generating a sequence of contexts from the entry context;
  - 5 determining a match of the entry context to one of the contexts in the sequence; and
  - 6 returning a PHIO represented by the match.
- 1 5. The method of claim 4 wherein the PHIO represents an exact match.
- 1 6. The method of claim 4 wherein the PHIO represents a near match.
- 1 7. The method of claim 4 wherein the PHIO represents a best match.
- 1 8. The method of claim 1 wherein each PHIO is characterized by one context from a set of all
  - 2 possible PHIOs.
- 1 9. The method of claim 8 wherein the set is characterized by maps that change a single
  - 2 attribute value and maps that change a pair of attribute values, the maps providing a

3 dimension in which neighboring relations with respect to an attribute or a combination of  
4 attributes are defined.

1 10. A computer program product, tangibly embodied in an information carrier, for  
2 maintaining a database, the computer program product being operable to cause data  
3 processing apparatus to:

4 maintain a collection of documents containing content, each of the documents  
5 including a hyperlink to another document and represented by a unique logical information  
6 object (LOIO), each unique LOIO pointing to one or more physical information objects  
7 (PHIOs), each of the PHIOs containing a variant of the content of a document, the variant  
8 being one of more attributes; and

9 determine a suitable PHIO when a LOIO is response to a request.

1 11. The computer product of claim 10 wherein the request is through a hyperlink.

1 12. The computer product of claim 10 wherein determining comprises:

2 receiving an entry context representing a desired set of values for one or more  
3 attributes;

4 generating a sequence of contexts from the entry context;

5 determining a match of the entry context to one of the contexts in the sequence; and

6 returning a PHIO represented by the match.

1 13. The computer product of claim 10 wherein each PHIO is characterized by one context  
2 from a set of all possible PHIOs.

1 14. The computer product of claim 8 wherein the set is characterized by maps that change a  
2 single attribute value and maps that change a pair of attribute values, the maps providing a  
3 dimension in which neighboring relations with respect to an attribute or a combination of  
4 attributes are defined.

1 15. A system for maintaining a database, the system comprising:

2 means for maintaining a collection of documents containing content, each of the  
3 documents including a hyperlink to another document and represented by a unique logical  
4 information object (LOIO), each unique LOIO pointing to one or more physical information  
5 objects (PHIOs), each of the PHIOs containing a variant of the content of a document, the  
6 variant being one of more attributes; and  
7 means for determining a suitable PHIO when a LOIO is response to a request.

1 16. The system of claim 15 wherein the request is through a hyperlink.

1 17. The system of claim 15 wherein the attributes include a name of a component, a version  
2 of the component, a language of the document and/or a country version of the document.

1 18. The system of claim 15 wherein the means for determining comprises:

2 receiving an entry context representing a desired set of values for one or more  
3 attributes;

4 generating a sequence of contexts from the entry context;

5 determining a match of the entry context to one of the contexts in the sequence; and

6 returning a PHIO represented by the match.

1 19. The system of claim 15 wherein each PHIO is characterized by one context from a set of  
2 all possible PHIOs.

1 20. The system of claim 8 wherein the set is characterized by maps that change a single  
2 attribute value and maps that change a pair of attribute values, the maps providing a  
3 dimension in which neighboring relations with respect to an attribute or a combination of  
4 attributes are defined.